APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,232	12/27/2001	Leo Temoshenko	062891.0662	9099

			EXAMINER
5073 7590 04/06/2005			CHUNG, JI YONG DAVID

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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/034,232	TEMOSHENKO ET AL.
	Examiner	Art Unit	
	Ji-Yong D. Chung	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

9# C

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   **Claims 1-6, 11-12, 16-18, and 21-22** are rejected under 35 U.S.C. 102(e) as being

anticipated by Aviani et al (Aviani hereinafter).

With regard to **claim 1**, Aviani shows a system comprising:

a line interface operable to receive a set-up request packet [interfaces 68, Fig. 8. See

lines 21-38, column 17. Note that each of the BOOM server and BOOM client has an interface];

a switch processor operable to process set-up request packet [BOOM server ("a switch

processor") in Fig. 2, but implemented as in Fig. 8. See lines 21-38, column 17] and

a plurality of processors, the switch processor operable to direct the set-up request

packet to a selected one of the plurality of processors [BOOM client servers in Fig. 2, but

implemented as in Fig. 8. See lines 21-38, column 17];

the selected one of the plurality of processors operable to generate a set-up reply packet

in response to the set-up request packet [BOOM client server ("plurality of processors") in Fig.

2. In lines 1-24, column 8, it is noted that BOOM client server responds to a client's SYN

packet], *the set-up reply packet including a virtual identifier associated with the selected one of*

the plurality of processors as assigned by the switch processor [See lines 55-67, column 8. The

unique identifier referenced in the passage is the "virtual identifier".], *the selected one of the*

plurality of processors operable to transport the set-up reply packet through the line interface in

order to establish communication session with the selected one of the plurality of processors.

The selected one of the BOOM client servers is operable to transport the ACK through its

interface. See Fig. 2 and Fig. 8.

Note that the system maybe implemented with network elements (e.g., routers, switches).

See liens 12-20, column 17.

With regard to **claim 2**, Aviani shows *the line interface is operable to receive an*

information request packet in the communication session, the information request packet

including the virtual identifier, the line interface operable to direct the information request

packet to the selected one the plurality of processors associated with the virtual identifier. The

line interface of the BOOM server (see lines 21-38, column 17) is operable to receive

information request packet (see lines 54-50, column 7). The information packets are directed to

the BOOM client servers and thus have virtual identifiers. See lines 36-55, column 10 for the

description of BOOM server redirecting messages to BOOM client servers. The unique

identifier maybe an IP address or it maybe assigned by the BOOM server.

With regard to **claim 3**, Aviani shows *the selected one of the plurality of processors is*

operable to generate an information reply packet in response to the information request packet,

the information reply packet including the virtual identifier [See lines 55-68, column 8, where it

is indicated that BOOM client server generates ACK in response to SYN]

With regard to **claim 4**, Aviani shows *a virtual identification manager, the virtual*

identification manager comprising one or more associations of one or more virtual identifiers

with one or more of the plurality of processor. See lines 50-54, column 8. The BOOM server

assigns starting a unique starting number. Furthermore see lines 39-44, column 8. The BOOM

client server sequence number includes information for identifying the particular BOOM client

server. Note that in assigning the virtual identifier, the BOOM server must keep track of the

associations between the identifier and the BOOM client server; otherwise, BOOM server could

not use assigned id's to direct packets to BOOM client server. Therefore, the claimed feature is

inherent in Aviani.

With regard to **claim 5**, Aviani shows *the switch processor is operable to designate the*

associations between virtual identifiers and the plurality of processors to the line interface. See

interfaces 68, Fig. 8. See lines 21-38, column 17. Note that each of the BOOM server and

BOOM client has an interface. The BOOM server is able to direct messages via its interface,

using the association between the virtual identifiers and the BOOM client servers; otherwise, it.

would not be able to select one of the BOOM client servers.

With regard to **claim 6**, Aviani shows *switching fabric operable to route packets to the*

plurality of processors, the line interface operable to provide information packets received in the

communication session to the switching fabric for routing to the selected one of the plurality of

processors without directly engaging the switch processor. The switching fabric is the network

formed by the BOOM server and BOOM client servers (BCS) to redirect packets to a particular

BCS. See Fig. 2. After several exchanges of messages, the client will exclusively engage only

one of the BOOM client servers (BCS). See lines 13-42, column 11.

Claims 12, 18, and 22 substantively refer to the limitation "identifying the virtual

identifier" in various forms of claim language. Note that BOOM server meets the limitation,

because it redirects traffic to the BOOM client servers (BCS) based on the intercepted messages

and the id embedded in the packet. See lines 36-55, column 10.

Claims 11-12, 16-18, and 21-22 substantively incorporate a number of limitations from

the set of all limitations of claims 1-6, but in method form, means-plus-function form, and in

software product form, rather than in apparatus form. The reasons for the rejections of claims 1-

6 apply to claims 11-12, 16-18, and 21-22. Therefore, claims 11-12, 16-18, and 21-22 are

rejected for substantially the same reasons.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   **Claims 10, 15, 20, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aviani.

With regard to **claim 10**, Aviani does not show that *the plurality of processors are operable to query the switch processor for an associated virtual identifier upon initialization.*

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to have BCS client servers ("plurality of processors"), upon initialization, query the BOOM server ("switch processor"), because the design obviates the implementation of server code (in hardware or software) for detecting BCS ready-to-operate condition and distributing the virtual identifier. Such code places additional computational burden on the server and unnecessarily increases the network traffic.

Claims 15, 20, and 25 substantively incorporate all the limitations of claim 10, but in method form, means-plus function form, and software product form, rather than in apparatus form. The reasons for the rejections of claim 10 apply to claims 15, 20, and 25. Therefore, claims 15, 20, and 25 are rejected for substantially the same reasons.

5.   **Claims 7-9, 13-14, 19, and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aviani in view of Hamami.

In reference to **claim 7**, Aviani does not show *the switch processor selects a backup processor addition to the selected one of the plurality of processors, the backup processor operable to process the communication session in response to a failure in the selected one of the plurality of processors.* Hamami shows a backup network element from line 65, column 1 to line 6, column 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a redundant network element (i.e., backup) for one of BOOM client servers ("plurality of processors"), in order to provide for redundancy and high degree of fault recovery (See from line 65, column 1 to line 6, column 2).

In reference to **claim 8**, Aviani does not show that *the backup processor is assigned selected one of the virtual identifiers.* However, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide for the virtual identifier, because without the identifier, the backup processor would not be able to serve as a failover. It must have the identifier in order for the BOOM server to direct the initial traffic to the backup server.

In reference to **claim 9**, Aviani does not show *the switch processor provides state information to the backup processor, the state information associated with the communication session associated with the selected one of the plurality of processors.*

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the backup processor query the switch processor, because in case of failure, the failed

processor may not be able to provide the necessary information. The central processor (switch

processor) must provide it.

Claims 13 and 23 substantively incorporate all the limitations of claims 7-9, but in

method form and software product form, rather than in apparatus form. The reasons for the

rejections of claims 7-9 apply to claims 13 and 23. Therefore, claims 13 and 23 are rejected for

substantially the same reasons.

In reference to **claims 14, 19, and 24**, the substance of all their limitations, except two,

have been discussed. The discussion of the two limitations follows, with reference to claim 14.

Claims 19 and 24 incorporate the two limitations in means-plus-function form and in software

product form, rather than in method form. Therefore, the following discussion also applies to

claims 19 and 24.

In **claim 14**, the two limitations are:

determining whether the selected one of the plurality of processors associated with the

virtual identifier is operational [Hamami shows failure detection in Fig. 7. Aviani does not

show the step]; and

directing the data packet to the backup processor in response to the selected one of the

plurality of processors associated with the virtual identifier not being operational [Hamami

shows the redirecting the packets to the redundant network element from the failed one (See Fig.

7)].

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988.

The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ji-Yong D. Chung
Patent Examiner
Art Unit: 2143